

Remarks

Claims 1, 2 and 6 are amended and claim 10 is added.

Claims 1 to 10 are pending in this application of which only claim 1 is in independent form.

The abstract was objected to because it was too long.

Accordingly, applicants have amended the abstract so that it is now less than 150 words as required by MPEP §608.01(b).

Claims 1 to 9 were rejected under 35 USC 103(a) as being unpatentable over Ishiyama. The following will show that claim 1, as amended, patentably distinguishes the applicants' invention over this reference.

The channel in Ishiyama is long and is designed for a frequency of 5 to 20 Hz or 20 to 50 Hz. If one were to provide a channel to arrive at a resonance frequency of 130 Hz, one would have to radically change the configuration of Ishiyama and provide a correspondingly short and wide channel rather than one that is long and narrow. In the action, this is deemed to be a constructive measure obvious to a person of ordinary skill.

Applicants respectfully disagree with this conclusion set forth in the action.

First, one would have to come upon the idea that a resonance frequency of approximately 130 Hz is even wanted. To achieve this in Ishiyama, a suitably large breakthrough would have to be made in the partition wall 34 disposed between the work chamber 30 and the compensating chamber 46 of this reference.

The significant advantage of the applicants' invention

compared to Ishiyama is not so much in the damping action, but in the magnitude of the maximum possible spring stroke. In the applicants' invention, the compensation chamber is laterally of and directly next to the work chamber and, for this reason, the entire distance between the inner support body 6 and the sleeve-shaped outer body 4 is available for the spring/damper stroke. In Ishiyama, only 15% remains because of the many chambers, which are arranged one upon the other, including the intermediate walls.

In contrast to Ishiyama, the clear distance and therefore the maximum possible work stroke is given by the spacing between the inner support body 6 and the sleeve-shaped outer body 4.

This is set forth in applicants' claim 1 with the clause:

"said volume-changeable work chamber having a clear distance between said inner support body and said sleeve-shaped outer body;"

The above feature is possible because the compensating chamber is laterally of and directly next to the work chamber as set forth in the clause:

"at least one compensating chamber disposed laterally of and directly next to said work chamber;"

A common lateral surface delimits the transfer channel between the work chamber and the compensating chamber as also now set forth in claim 1 with the clause:

"a transfer channel interconnecting said work chamber and said compensating chamber and being delimited by said common lateral surface;"

In Ishiyama, there is no suggestion for achieving a

resonance frequency as set forth in the applicants' disclosure, let alone, any hint as to a possible configuration of the transfer channel and the disposition of the work and compensation chambers relative to each other which could possibly achieve this goal.

Indeed, the isolating apparatus of Ishiyama has a very different configuration than that of the applicants' invention and is not comparable thereto. In Ishiyama, three chambers and two intermediate walls are disposed between the center part and the outer housing, that is, a comparably small distance remains as the clear work chamber stroke for vibration damping.

Applicants note that their invention provides a hydraulic radial bearing which is small in configuration and nonetheless makes possible a long spring path thereby providing that the maximum of the reduction of the dynamic stiffness is at approximately 130 Hz.

In standard hydraulic radial bearings, of which Ishiyama is exemplary, the maximum of the damping lies in a frequency range of 5 to 20 Hz. A damping of this kind is usually achieved with the aid of a long narrow annular channel which connects the work chamber and the compensation chamber to each other.

In Ishiyama, there are two damping channels (20, 22) and the first channel 20 leads to a first compensation chamber 46 for the frequency range 5 to 20 Hz and a second damper channel 22 leads to a second compensating chamber 50 for the frequency range of 20 to 50 Hz. The compensating chamber 50 is arranged diametrically opposite to the work chamber 30. For this reason, the channel 22, which connects the work chamber 30 and the

compensating chamber 30, cannot be shortened; that is, the configuration presented by Ishiyama makes it impossible to achieve frequencies above the range of 20 to 50 Hz with purely dimensioning measures as noted in the applicants' disclosure on page 5, lines 16 to 18, much less, a frequency of approximately 130 Hz as recited in applicants' claim 1.

In the applicants' invention, the compensating chamber 20a is mounted wall to wall laterally next to the work chamber 10. With the lateral arrangement of the compensating chamber directly next to the work chamber, a large clear distance in the work chamber is provided for the vibration stroke notwithstanding the compact configuration. Because of the common lateral surface between the work chamber 10 and the compensating chamber 20a, the transfer channel between these two chambers is really a break out in the wall and therefore runs only a very short distance and the cross section A₂ and the length L are so dimensioned that the desired absorbing frequency of approximately 130 Hz results. In this connection, reference can be made to page 6, lines 7 to 25, of the applicants' disclosure.

In view of the above, applicants submit that claim 1, as amended, should now patentably distinguish the applicants' invention over Ishiyama and be allowable. The remaining claims are all dependent from claim 1 so that they too should now be allowable.

Reconsideration of the application is earnestly solicited.

Respectfully submitted,



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